

UCLA CEE 141: Structural Steel Design

Fall 2018

Class Project Assignment



Westwood Blvd.

Los Angeles, CA 90024

MEMO

Date: November 14, 2018

To: CE 141 Student Engineering Firms

From: Susie Bruin, AIA, Principal Architect

Re: West Coast Office Headquarters for Yoogle
Increment 3: Floor Beam Design Submittal Requirements

Please fulfill the following requirements for Increment 3 of the project, due Tuesday, November 27, 2018 by 11:00 pm. Submittals shall be electronic and in PDF Format only.

- Design all floor beams and girders as composite members.
 - Use the optimal framing orientation you determined for roof members in Increment 2.
 - Use the typical floor dead and live loads that you determined in Increment 1 (incorporating corrections per our comments).
 - Consider exterior wall dead loads on the edge beams/girders where they occur.
 - Observe the deflection limitations as described in the Project Overview memo.

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- You may consider beams to be laterally supported by the floor deck for precomposite loads.
 - Consider girders to be laterally braced only by the beam connections for precomposite loads.
 - The W3 metal deck selected can span a maximum distance of 12'-0" between supporting beams under the wet weight of concrete.
 - You can assume that the 35' maximum column limit (from Increment 1) need not apply to your beams and girders for either Increment 2 or 3.
- Submit a draft of the Floor Framing Plans (S2.0 and S2.1) for review.
 - Draw all beams and girders on the plan.
 - Indicate the size of each beam and girder on the plans.
 - Indicate the number of studs and camber (if any) for each beam.
 - Indicate the size of the studs used as a sheet note on each plan.
 - Indicate the direction of the deck span.
 - Indicate the orientation of each column.
 - It is acceptable to submit the plans as an 8 ½" x 11" print for this Increment.
- Submit your design calculations for review.
 - Include a sketch of each framing plan in the calcs to indicate how beams are grouped for design of similar members.
 - Use the designations B1, B2... for beams and G1, G2... for girders and use these designations to identify the individual beam/girder calculations.

Remember to keep the original copy of your work and hand in a copy for review. Be sure to incorporate any general comments from the previous Increments into this submittal.